

Applic. No. 09/894,674
Amdt. dated July 31, 2006
Reply to Office action of March 31, 2006

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Claim Amendments

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A method for determining a position of a printing image on a ~~piece~~ of printed material sheet in a printing machine, which comprises the steps of: moving the printed sheet past a first optical sensor and a second optical sensor in a prescribed direction of motion and with a predetermined velocity, determining a spaced distance between the first and the second optical sensor in the direction of motion; acquiring, [[by a]] with the first optical sensor, a mark disposed on the ~~piece~~ of printed material sheet; acquiring, [[by a]] with the second optical sensor, an a leading edge of the ~~piece~~ of printed material sheet; determining a time span between acquiring the leading edge and acquiring the mark; and calculating, [[by]] with an evaluation unit, a spaced distance of the mark from the leading edge from the time span, the spaced distance between the optical sensors, and the velocity.

Claim 2 (original): The method according to claim 1, which includes comparing the spaced distance of the mark, which has

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been calculated by the evaluation unit, with a prescribed nominal spaced distance, and emitting an output signal if the calculated spaced distance deviates from the nominal spaced distance by more than a prescribed value.

Claim 3 (currently amended): The method according to claim 2, which includes forming the output signal as a positioning signal, and feeding the positioning signal to an adjustment device for controlling positioning organs for determining the position of the ~~piece~~ of printed material sheet in the printing machine.

Claim 4 (cancelled).

Claim 5 (currently amended): The method according to claim 1, which includes acquiring, by a third and a fourth optical sensor, an additional mark and the leading edge of the ~~piece~~ of printed material sheet in vicinity of a side edge thereof disposed opposite the first and the second optical sensor, determining the spaced distance of the additional mark from the edge of the piece of printed material, comparing the spaced distance of the mark from the edge with the spaced distance of the additional mark from the edge, and emitting an output signal if the spaced distance of the mark from the edge

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and the spaced distance of the additional mark from the edge deviate from one another by more than a prescribed value.

Claim 6 (original): The method according to claim 1, which includes storing the spaced distance of the mark from the edge of a plurality of pieces of printed material, and determining a mean value for the spaced distance of the mark.

Claim 7 (original): The method according to claim 1, which includes providing as the mark a reference mark for adjusting partial printing images.

Claim 8 (original): The method according to claim 1, which includes storing the spaced distance for taking it into account in a further processing of the piece of printing material.

Claim 9 (previously presented): The method according to claim 1, which includes taking over a target spacing of the mark from the edge of the sheet from a printing pre-stage.

Claim 10 (currently amended): Monitoring device for a sheet-fed printing machine, comprising a transport device for moving a piece of printed material sheet in a prescribed direction of motion; a first optical sensor for acquiring a mark disposed

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on the ~~piece~~ of printed material sheet, a second optical sensor for acquiring an a leading edge of the ~~piece~~ of printed material sheet; an acquisition unit for determining the velocity of the ~~piece~~ of printed material sheet; and an evaluation unit for calculating

- a. a spaced distance between said mark and said edge from the chronological spacing between acquiring said edge and acquiring said mark;
- b. at least one of the velocity and the position of the ~~piece~~ of printed material sheet, and
- c. the determined spaced distance between said first and said second optical sensor, said spaced distance being parallel to the direction of motion of the ~~piece~~ of printed material sheet; and

a data storage unit for storing therein, by said evaluation unit, spaced distances of a plurality of printed sheets, said evaluation unit serving for calculating a mean value for the spaced distance of said mark from said edge of a plurality of printed sheets.

Claim 11 (cancelled).

Claim 12 (original): The monitoring device according to claim 10, wherein said first and said second optical sensor are disposed on one structural member or component.

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Claim 13 (previously presented): The monitoring device according to claim 16, including a movement device for moving one of said first, said second, said third, and said fourth optical sensors.

Claim 14 (previously presented): The monitoring device according to claim 10, wherein said second optical sensor includes a first and a second transmitter disposed at a prescribed spaced distance from one another and, a receiver for monitoring an observation point disposed between said first and said second transmitter, said transmitters serving for emitting a light signal impinging on said observation point.

Claim 15 (previously presented): The monitoring device according to claim 14, including a switch provided for activating one of said first and said second transmitters.

Claim 16 (currently amended): The monitoring device according to claim 10, wherein said first optical sensor and said second optical sensor are disposed in a vicinity of a first side edge of the ~~piece~~ of printed material sheet and including a third optical sensor and a fourth optical sensor disposed parallel to the first optical sensor and the second optical sensor in a

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vicinity of a second side edge of the ~~piece~~ ~~of~~ printed
material sheet.